
PPPPPPPPPPPP AAAAAAAAA SSSSSSSSSSS RRRRRRRRRRR TTTTTTTTTTTTTTT LLL
PPP PPP AAA AAA SSS RRR RRR TTT LLL
PPPPPPPPPPPP AAAAAAAAAAAAAAA SSS RRR RRR TTT LLL
PPP AAA AAA SSS RRR TTT LLL
PPP AAA AAA SSSSSSSSS RRRRRRRRRRR TTT LLL
PPP AAA AAA SSS RRR RRR TTT LLL
PPP PPP AAA AAA SSS RRR RRR TTT LLL
PPPPPPPPPPPP AAA AAA SSSSSSSSS RRRRRRRRRRR TTT LLL
PPP AAA AAA SSS RRR RRR TTT LLL
PPP AAA AAA SSS RRR RRR TTT LLL
PPP AAA AAA SSS RRR RRR TTT LLL
PPP AAA AAA SSSSSSSSSSS RRR RRR TTT LLLLLLLLLLLLLLL
PPP AAA AAA SSSSSSSSSSS RRR RRR TTT LLLLLLLLLLLLLLL
PPP AAA AAA SSSSSSSSSSS RRR RRR TTT LLLLLLLLLLLLLLL

FILEID**PASFILEUT

```
PPPPPPPP      AAAAAA      SSSSSSSS  FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE  UU      UU  TTTTTTTTTT
PPPPPPPP      AAAAAA      SSSSSSSS  FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE  UU      UU  TTTTTTTTTT
PP      PP   AA    AA    SS        FF              II      LL          EE          UU      UU      TT
PP      PP   AA    AA    SS        FF              II      LL          EE          UU      UU      TT
PP      PP   AA    AA    SS        FF              II      LL          EE          UU      UU      TT
PP      PP   AA    AA    SS        FF              II      LL          EE          UU      UU      TT
PPPPPPPP     AA    AA      SSSSSS  FFFFFFF         II      LL          EEEEEEE     UU      UU      TT
PPPPPPPP     AA    AA      SSSSSS  FFFFFFF         II      LL          EEEEEEE     UU      UU      TT
PP           AAAAAAAAAA          SS FF              II      LL          EE          UU      UU      TT
PP           AAAAAAAAAA          SS FF              II      LL          EE          UU      UU      TT
PP           AA    AA            SS FF              II      LL          EE          UU      UU      TT      ....
PP           AA    AA            SS FF              II      LL          EE          UU      UU      TT      ....
PP           AA    AA  SSSSSSSS    FF            IIIIII    LLLLLLLLLL  EEEEEEEEEE  UUUUUUUUUU      TT      ....
PP           AA    AA  SSSSSSSS    FF            IIIIII    LLLLLLLLLL  EEEEEEEEEE  UUUUUUUUUU      TT      ....

LL             IIIIII      SSSSSSSS
LL             IIIIII      SSSSSSSS
LL               II      SS
LL               II      SS
LL               II      SS
LL               II      SS
LL               II        SSSSSS
LL               II        SSSSSS
LL               II              SS
LL               II              SS
LL               II              SS
LL               II              SS
LLLLLLLLLL     IIIIII    SSSSSSSS
LLLLLLLLLL     IIIIII    SSSSSSSS
```

```
;     1          0001  0 MODULE PAS$$FILE_UTIL ( %TITLE 'File manipulation utility procedures'
;     2          0002  0                    IDENT = '1-005'          ! File: PASFILEUT.B32 Edit: SBL1005
;     3          0003  0                    ) =
;     4          0004  1 BEGIN
;     5          0005  1 !
;     6          0006  1 !******************************************************************************
;     7          0007  1 !*                                                                            *
;     8          0008  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                   *
;     9          0009  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                     *
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;    18          0018  1 !*                                                                            *
;    19          0019  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE     *
;    20          0020  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT     *
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;    22          0022  1 !*                                                                            *
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;    24          0024  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                    *
;    25          0025  1 !*                                                                            *
;    26          0026  1 !*                                                                            *
;    27          0027  1 !******************************************************************************
;    28          0028  1 !
;    29          0029  1
;    30          0030  1 !++
;    31          0031  1 ! FACILITY:     Pascal Language Support
;    32          0032  1 !
;    33          0033  1 ! ABSTRACT:
;    34          0034  1 !
;    35          0035  1 !       Utility procedures to manipulate the global list of files.
;    36          0036  1 !
;    37          0037  1 ! ENVIRONMENT:  User mode - AST reentrant
;    38          0038  1 !
;    39          0039  1 ! AUTHOR: Steven B. Lionel, CREATION DATE: 1-April-1981
;    40          0040  1 !
;    41          0041  1 ! MODIFIED BY:
;    42          0042  1 !
;    43          0043  1 ! 1-001 - Original.  SBL 1-April-1981
;    44          0044  1 ! 1-002 - Don't assume that PFV contains valid information in PAS$CLOSE_LOCAL_R3.
;    45          0045  1 !         Use DO_CLOSE_HANDLER to display error messages from DO_CLOSE.
;    46          0046  1 !         SBL 28-Jun-1982
;    47          0047  1 ! 1-003 - Set all PFV fields that are needed to close the file in PAS$$CLOSE_LOCAL.
;    48          0048  1 !         SBL 29-Jun-1982
;    49          0049  1 ! 1-004 - Move FCB$L_STATUS to PFV$L_STATUS in PAS$$REMOVE_FILE.
;    50          0050  1 !         QAR FT3-2  SBL 30-Aug-1982
;    51          0051  1 ! 1-005 - Allow PAS$$REMOVE_FILE to be called without the queue having been
;    52          0052  1 !         initialized.  This can occur if the first file opened in the program
;    53          0053  1 !         fails to open and the OPEN is unwound.  SBL 10-Jan-1983
;    54          0054  1 !--
;    55          0055  1
```

```
;    57          0056  1 %SBTTL 'Declarations'
;    58          0057  1 !
;    59          0058  1 ! PROLOGUE DEFINITIONS:
;    60          0059  1 !
;    61          0060  1
;    62          0061  1 REQUIRE 'RTLIN:PASPROLOG';                      ! Linkages, externals, PSECTs, structures
;    63          0125  1
;    64          0126  1 !
;    65          0127  1 ! TABLE OF CONTENTS:
;    66          0128  1 !
;    67          0129  1
;    68          0130  1 FORWARD ROUTINE
;    69          0131  1     PAS$$ADD_FILE: NOVALUE,                     ! Add file to global list
;    70          0132  1     PAS$$REMOVE_FILE: NOVALUE,                  ! Remove file from global list
;    71          0133  1     PAS$$PROMPT_ALL: NOVALUE,                   ! Prompt on all enabled files
;    72          0134  1     PAS$$PROMPT_FILE: JSB_PROMPT_FILE NOVALUE,  ! Prompt on a file
;    73          0135  1     PAS$$CLOSE_ALL: NOVALUE,                    ! Close all files
;    74          0136  1     PAS$CLOSE_LOCAL_R3: JSB_CLOSE_LOCAL NOVALUE,! Close all local files
;    75          0137  1     PAS$$CLOSE_LOCAL: JSB_CLOSE_LOCAL NOVALUE,  ! Internally callable
;    76          0138  1     DO_CLOSE: NOVALUE,                          ! Close a file
;    77          0139  1     DO_CLOSE_HANDLER,                           ! Handler for DO_CLOSE
;    78          0140  1     INITIALIZE_QUEUE: NOVALUE,                  ! Initialize FILE_QUEUE
;    79          0141  1     SERVICE_REQUEST: NOVALUE;                   ! Service remove request
;    80          0142  1
;    81          0143  1 !
;    82          0144  1 ! MACROS:
;    83          0145  1 !
;    84          0146  1 !       NONE
;    85          0147  1 !
;    86          0148  1 ! EQUATED SYMBOLS:
;    87          0149  1 !
;    88          0150  1 !       NONE
;    89          0151  1 !
;    90          0152  1 ! FIELDS:
;    91          0153  1 !
;    92          0154  1 !       NONE
;    93          0155  1 !
;    94          0156  1 ! OWN STORAGE:
;    95          0157  1 !
;    96          0158  1
;    97          0159  1 OWN
;    98          0160  1     FILE_QUEUE: VECTOR [2, LONG],               ! Queue of FCBs
;    99          0161  1     REQUEST_LEVEL: INITIAL (-1),                ! Reentrancy level
;   100          0162  1     QUEUE_INITIALIZED: INITIAL (0),             ! True if queue initialized
;   101          0163  1     REMOVE_REQUESTED: INITIAL (0);              ! Remove requested from AST level
```

```
;  103          0164  1 %SBTTL 'PAS$$ADD_FILE - Add file to queue'
;  104          0165  1 GLOBAL ROUTINE PAS$$ADD_FILE (
;  105          0166  1     FCB: REF $PAS$FCB_CONTROL_BLOCK
;  106          0167  1     ): NOVALUE =
;  107          0168  1
;  108          0169  1 !++
;  109          0170  1 ! FUNCTIONAL DESCRIPTION:
;  110          0171  1 !
;  111          0172  1 !       Adds a file's FCB to the queue of files.
;  112          0173  1 !
;  113          0174  1 ! CALLING SEQUENCE:
;  114          0175  1 !
;  115          0176  1 !       PAS$$ADD_FILE (FCB.r.r)
;  116          0177  1 !
;  117          0178  1 ! FORMAL PARAMETERS:
;  118          0179  1 !
;  119          0180  1 !       FCB             File Control Block for file
;  120          0181  1 !
;  121          0182  1 ! IMPLICIT INPUTS:
;  122          0183  1 !
;  123          0184  1 !       FILE_QUEUE
;  124          0185  1 !       REQUEST_LEVEL
;  125          0186  1 !       QUEUE_INITIALIZED
;  126          0187  1 !       REMOVE_REQUESTED
;  127          0188  1 !
;  128          0189  1 ! IMPLICIT OUTPUTS:
;  129          0190  1 !
;  130          0191  1 !       NONE
;  131          0192  1 !
;  132          0193  1 ! COMPLETION STATUS:
;  133          0194  1 !
;  134          0195  1 !       NONE
;  135          0196  1 !
;  136          0197  1 ! SIDE EFFECTS:
;  137          0198  1 !
;  138          0199  1 !       Inserts FCB onto head of FILE_QUEUE.
;  139          0200  1 !
;  140          0201  1 ! SIGNALLED ERRORS:
;  141          0202  1 !
;  142          0203  1 !       NONE
;  143          0204  1 !--
;  144          0205  1
;  145          0206  2     BEGIN
;  146          0207  2
;  147          0208  2     BUILTIN
;  148          0209  2         INSQUE;
;  149          0210  2
;  150          0211  2     !+
;  151          0212  2     ! Initialize the queue if necessary.
;  152          0213  2     !-
;  153          0214  2
;  154          0215  2     IF NOT .QUEUE_INITIALIZED
;  155          0216  2     THEN
;  156          0217  2         INITIALIZE_QUEUE ();
;  157          0218  2
;  158          0219  2     !+
;  159          0220  2     ! Increment REQUEST_LEVEL.
```

```
;  160          0221  2      !-
;  161          0222  2
;  162          0223  2      REQUEST_LEVEL = .REQUEST_LEVEL + 1;
;  163          0224  2
;  164          0225  2      !+
;  165          0226  2      ! Insert FCB onto FILE_QUEUE at head.
;  166          0227  2      !-
;  167          0228  2
;  168          0229  2      INSQUE (FCB [FCB$L_QUEUE_FLINK], FILE_QUEUE);
;  169          0230  2
;  170          0231  2      !+
;  171          0232  2      ! Mark the FCB as being on the queue.
;  172          0233  2      !-
;  173          0234  2
;  174          0235  2      FCB [FCB$V_ON_QUEUE] = 1;
;  175          0236  2
;  176          0237  2      !+
;  177          0238  2      ! Decrement REQUEST_LEVEL.
;  178          0239  2      !-
;  179          0240  2
;  180          0241  2      REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  181          0242  2
;  182          0243  2      !+
;  183          0244  2      ! If a remove request has been made, service it.
;  184          0245  2      !-
;  185          0246  2
;  186          0247  2      IF .REMOVE_REQUESTED
;  187          0248  2      THEN
;  188          0249  2          SERVICE_REQUEST ();
;  189          0250  2
;  190          0251  2      RETURN;
;  191          0252  2
;  192          0253  1      END;                                    ! End of routine PAS$$ADD_FILE


;                                        .TITLE  PAS$$FILE_UTIL File manipulation utility proced
                                                 ures
                                         .IDENT  \1-005\

                                         .PSECT  _PAS$DATA,NOEXE,  PIC,2

                                 00000 FILE_QUEUE:
                                         .BLKB   8
                              FFFFFFFF   00008 REQUEST_LEVEL:
                                         .LONG   -1                                              ;
                              00000000   0000C QUEUE_INITIALIZED:
                                         .LONG   0                                               ;
                              00000000   00010 REMOVE_REQUESTED:
                                         .LONG   0                                               ;

                                         .EXTRN  PAS$$ADD_FILE, PAS$$REMOVE_FILE
                                         .EXTRN  PAS$$PROMPT_ALL
                                         .EXTRN  PAS$$PROMPT_FILE
                                         .EXTRN  PAS$$CLOSE_ALL, PAS$CLOSE_LOCAL_R3
                                         .EXTRN  PAS$$CLOSE_LOCAL

                                         .PSECT  _PAS$CODE,NOWRT,  SHR,  PIC,2
```

```
                                    0004 00000          .ENTRY  PAS$$ADD_FILE, Save R2                  ; 0165
                          52 00000000'  EF  9E 00002    MOVAB   REQUEST_LEVEL, R2                       ;
                          05        04  A2  E8 00009    BLBS    QUEUE_INITIALIZED, 1$                   ; 0215
                    0000V CF            00  FB 0000D    CALLS   #0, INITIALIZE_QUEUE                    ; 0217
                                        62  D6 00012 1$: INCL    REQUEST_LEVEL                           ; 0223
                          50        04  AC  D0 00014    MOVL    FCB, R0                                 ; 0229
                       FB A2        BC  A0  0E 00018    INSQUE  -68(R0), FILE_QUEUE                     ;
                          50        04  AC  D0 0001D    MOVL    FCB, R0                                 ; 0235
                       FE A0            20  88 00021    BISB2   #32, -2(R0)                             ;
                                        62  D7 00025    DECL    REQUEST_LEVEL                           ; 0241
                          05        08  A2  E9 00027    BLBC    REMOVE_REQUESTED, 2$                    ; 0247
                    0000V CF            00  FB 0002B    CALLS   #0, SERVICE_REQUEST                     ; 0249
                                        04  00030 2$:    RET                                             ; 0253

; Routine Size:  49 bytes,    Routine Base:  _PAS$CODE + 0000

;  193          0254  1
;  194          0255  1 !<BLF/PAGE>
```

```
;  196     0256  1 %SBTTL 'PAS$$REMOVE_FILE - Remove file from queue'
;  197     0257  1 GLOBAL ROUTINE PAS$$REMOVE_FILE (
;  198     0258  1     FCB: REF $PAS$FCB_CONTROL_BLOCK
;  199     0259  1     ): NOVALUE =
;  200     0260  1
;  201     0261  1 !++
;  202     0262  1 ! FUNCTIONAL DESCRIPTION:
;  203     0263  1 !
;  204     0264  1 !       Remove a file's FCB from the queue of files.
;  205     0265  1 !
;  206     0266  1 ! CALLING SEQUENCE:
;  207     0267  1 !
;  208     0268  1 !       PAS$$REMOVE_FILE (FCB.r.r)
;  209     0269  1 !
;  210     0270  1 ! FORMAL PARAMETERS:
;  211     0271  1 !
;  212     0272  1 !       FCB             File Control Block for file
;  213     0273  1 !
;  214     0274  1 ! IMPLICIT INPUTS:
;  215     0275  1 !
;  216     0276  1 !       FILE_QUEUE
;  217     0277  1 !       REQUEST_LEVEL
;  218     0278  1 !       QUEUE_INITIALIZED
;  219     0279  1 !       REMOVE_REQUESTED
;  220     0280  1 !
;  221     0281  1 ! IMPLICIT OUTPUTS:
;  222     0282  1 !
;  223     0283  1 !       FILE_QUEUE
;  224     0284  1 !       REQUEST_LEVEL
;  225     0285  1 !       QUEUE_INITIALIZED
;  226     0286  1 !       REMOVE_REQUESTED
;  227     0287  1 !       FCB [FCB$V_DEALLOC]
;  228     0288  1 !
;  229     0289  1 ! COMPLETION STATUS:
;  230     0290  1 !
;  231     0291  1 !       NONE
;  232     0292  1 !
;  233     0293  1 ! SIDE EFFECTS:
;  234     0294  1 !
;  235     0295  1 !       Removes FCB from FILE_QUEUE or requests deallocation.
;  236     0296  1 !
;  237     0297  1 ! SIGNALLED ERRORS:
;  238     0298  1 !
;  239     0299  1 !       NONE
;  240     0300  1 !--
;  241     0301  1
;  242     0302  2     BEGIN
;  243     0303  2
;  244     0304  2     BUILTIN
;  245     0305  2         REMQUE;
;  246     0306  2
;  247     0307  2     !+
;  248     0308  2     ! Initialize the queue if necessary.
;  249     0309  2     !-
;  250     0310  2
;  251     0311  2     IF NOT .QUEUE_INITIALIZED
;  252     0312  2     THEN
```

```
;  253          0313  2          INITIALIZE_QUEUE ();
;  254          0314  2
;  255          0315  2      !+
;  256          0316  2      ! Invalidate FCB pointer in PFV.
;  257          0317  2      !-
;  258          0318  2
;  259          0319  3      BEGIN
;  260          0320  3      LOCAL
;  261          0321  3          PFV: REF $PAS$PFV_FILE_VARIABLE;
;  262          0322  3      PFV = .FCB [FCB$A_PFV];
;  263          0323  3      PFV [PFV$V_FCB_VA[ID] = 0;
;  264          0324  3      PFV [PFV$L_STATUS] = .FCB [FCB$L_STATUS];   ! Overlays PFV$A_FCB
;  265          0325  2      END;
;  266          0326  2
;  267          0327  2
;  268          0328  2      !+
;  269          0329  2      ! If the FCB is not on the queue then simply free the
;  270          0330  2      ! storage and return.
;  271          0331  2      !-
;  272          0332  2
;  273          0333  2      IF NOT .FCB [FCB$V_ON_QUEUE]
;  274          0334  2      THEN
;  275          0335  3          BEGIN
;  276          0336  3          LOCAL
;  277          0337  3              BLOCK_ADDR; ! Address of allocated block
;  278          0338  3          BLOCK_ADDR = FCB [FCB$L_QUEUE_FLINK];
;  279          0339  3          PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, BLOCK_ADDR);
;  280          0340  3          END
;  281          0341  3
;  282          0342  2      ELSE
;  283          0343  2
;  284          0344  3          BEGIN
;  285          0345  3          !+
;  286          0346  3          ! Increment REQUEST_LEVEL.  If we are at level zero, then we can do the
;  287          0347  3          ! REMQUE directly, so do it and free the storage.
;  288          0348  3          ! Otherwise set the DEALLOC bit in the FCB and set REMOVE_REQUESTED.
;  289          0349  3          !-
;  290          0350  3
;  291          0351  3          IF (REQUEST_LEVEL=.REQUEST_LEVEL+1) EQL 0
;  292          0352  3          THEN
;  293          0353  4              BEGIN
;  294          0354  4              LOCAL
;  295          0355  4                  ITEM_ADDR;                          ! Output from REMQUE
;  296          0356  4              REMQUE (FCB [FCB$L_QUEUE_FLINK], ITEM_ADDR);
;  297          0357  4              FCB [FCB$V_ON_QUEUE] = 0;
;  298          0358  4              PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, ITEM_ADDR);
;  299          0359  4              END
;  300          0360  3          ELSE
;  301          0361  4              BEGIN
;  302          0362  4              FCB [FCB$V_DEALLOC] = 1;
;  303          0363  4              REMOVE_REQUESTED = 1;
;  304          0364  3              END;
;  305          0365  3
;  306          0366  3          !+
;  307          0367  3          ! Decrement REQUEST_LEVEL.
;  308          0368  3          !-
;  309          0369  3
```

```
;  310          0370  3          REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  311          0371  3
;  312          0372  2          END;
;  313          0373  2
;  314          0374  2      !+
;  315          0375  2      ! If a remove request has been made, service it.
;  316          0376  2      !-
;  317          0377  2
;  318          0378  2      IF .REMOVE_REQUESTED
;  319          0379  2      THEN
;  320          0380  2          SERVICE_REQUEST ();
;  321          0381  2
;  322          0382  2      RETURN;
;  323          0383  2
;  324          0384  1      END;                                  ! End of routine PAS$$REMOVE_FILE


                                                                   .EXTRN  PAS$$FREE_VM

                                                    001C 00000     .ENTRY  PAS$$REMOVE_FILE, Save R2,R3,R4                ; 0257
                                54 00000000G    00   9E 00002     MOVAB   PAS$$FREE_VM, R4                               ;
                                53 00000000'    EF   9E 00009     MOVAB   REQUEST_LEVEL, R3                              ;
                                5E              08   C2 00010     SUBL2   #8, SP                                         ;
                                05        04    A3   E8 00013     BLBS    QUEUE_INITIALIZED, 1$                          ; 0311
                          0000V CF              00   FB 00017     CALLS   #0, INITIALIZE_QUEUE                           ; 0313
                                52        04    AC   D0 0001C 1$: MOVL    FCB, R2                                      ; 0322
                                50        DC    A2   D0 00020     MOVL    -36(R2), PFV                                   ;
                             07 A0        40    8F   8A 00024     BICB2   #64, 7(PFV)                                    ; 0323
                             0C A0        D4    A2   D0 00029     MOVL    -44(R2), 12(PFV)                               ; 0324
                          10 FE A2              05   E0 0002E     BBS     #5, -2(R2), 2$                                 ; 0333
                                6E        BC    A2   9E 00033     MOVAB   -68(R2), BLOCK_ADDR                            ; 0338
                                5E              DD   00037        PUSHL   SP                                             ; 0339
                                7E      0138    8F   3C 00039     MOVZWL  #312, -(SP)                                    ;
                                64              02   FB 0003E     CALLS   #2, PAS$$FREE_VM                               ;
                                                2B   11 00041     BRB     5$                                             ; 0333
                                                63   D6 00043 2$: INCL    REQUEST_LEVEL                                  ; 0351
                                                1D   12 00045     BNEQ    3$                                             ;
                                52        BD    A2   9E 00047     MOVAB   -67(R2), R2                                    ; 0356
                             04 AE              72   0F 0004B     REMQUE  -(R2), ITEM_ADDR                               ;
                                50        04    AC   D0 0004F     MOVL    FCB, R0                                        ; 0357
                             FE A0              20   8A 00053     BICB2   #32, -2(R0)                                    ;
                                          04    AE   9F 00057     PUSHAB  ITEM_ADDR                                      ; 0358
                                7E      0138    8F   3C 0005A     MOVZWL  #312, -(SP)                                    ;
                                64              02   FB 0005F     CALLS   #2, PAS$$FREE_VM                               ;
                                                08   11 00062     BRB     4$                                             ; 0351
                             FE A2              02   88 00064 3$: BISB2   #2, -2(R2)                                     ; 0362
                             08 A3              01   D0 00068     MOVL    #1, REMOVE_REQUESTED                           ; 0363
                                                63   D7 0006C 4$: DECL    REQUEST_LEVEL                                  ; 0370
                                05        08    A3   E9 0006E 5$: BLBC    REMOVE_REQUESTED, 6$                           ; 0378
                          0000V CF              00   FB 00072     CALLS   #0, SERVICE_REQUEST                            ; 0380
                                                04   00077 6$:    RET                                                    ; 0384

; Routine Size:  120 bytes,    Routine Base:  _PAS$CODE + 0031

;  325          0385  1
```

```
;  326          0386  1 !<BLF/PAGE>
```

```
;   328          0387  1 %SBTTL 'PAS$$PROMPT_ALL - Prompt on all prompt-enabled files'
;   329          0388  1 GLOBAL ROUTINE PAS$$PROMPT_ALL
;   330          0389  1     : NOVALUE =
;   331          0390  1
;   332          0391  1 !++
;   333          0392  1 ! FUNCTIONAL DESCRIPTION:
;   334          0393  1 !
;   335          0394  1 !       Finds all files for which prompting is enabled and which have
;   336          0395  1 !       partial lines and writes the partial lines.
;   337          0396  1 !
;   338          0397  1 ! CALLING SEQUENCE:
;   339          0398  1 !
;   340          0399  1 !       PAS$$PROMPT_ALL ()
;   341          0400  1 !
;   342          0401  1 ! FORMAL PARAMETERS:
;   343          0402  1 !
;   344          0403  1 !       NONE
;   345          0404  1 !
;   346          0405  1 ! IMPLICIT INPUTS:
;   347          0406  1 !
;   348          0407  1 !       FILE_QUEUE
;   349          0408  1 !       REQUEST_LEVEL
;   350          0409  1 !       QUEUE_INITIALIZED
;   351          0410  1 !       REMOVE_REQUESTED
;   352          0411  1 !
;   353          0412  1 ! IMPLICIT OUTPUTS:
;   354          0413  1 !
;   355          0414  1 !       NONE
;   356          0415  1 !
;   357          0416  1 ! COMPLETION STATUS:
;   358          0417  1 !
;   359          0418  1 !       NONE
;   360          0419  1 !
;   361          0420  1 ! SIDE EFFECTS:
;   362          0421  1 !
;   363          0422  1 !
;   364          0423  1 ! SIGNALLED ERRORS:
;   365          0424  1 !
;   366          0425  1 !--
;   367          0426  1
;   368          0427  2     BEGIN
;   369          0428  2
;   370          0429  2     LOCAL
;   371          0430  2         FCB: REF $PAS$FCB_CONTROL_BLOCK;        ! File control block
;   372          0431  2
;   373          0432  2     BIND
;   374          0433  2         RAB = FCB: REF BLOCK [, BYTE];          ! RAB is FCB
;   375          0434  2
;   376          0435  2     BUILTIN
;   377          0436  2         TESTBITCS;
;   378          0437  2
;   379          0438  2     !+
;   380          0439  2     ! If queue is not initialize, bugcheck.
;   381          0440  2     !-
;   382          0441  2
;   383          0442  2     IF NOT .QUEUE_INITIALIZED
;   384          0443  2     THEN
```

```
;  385     0444  2          $PAS$BUGCHECK (BUG_FQNOTINIT);
;  386     0445  2
;  387     0446  2      !+
;  388     0447  2      ! Increment REQUEST_LEVEL.
;  389     0448  2      !-
;  390     0449  2
;  391     0450  2      REQUEST_LEVEL = .REQUEST_LEVEL + 1;
;  392     0451  2
;  393     0452  2      !+
;  394     0453  2      ! Get the first file from the queue.
;  395     0454  2      !-
;  396     0455  2
;  397     0456  2      FCB = .FILE_QUEUE [0];
;  398     0457  2
;  399     0458  2      !+
;  400     0459  2      ! While there are files left, look for files to prompt on.
;  401     0460  2      !-
;  402     0461  2
;  403     0462  2      WHILE (FCB [FCB$R_FCB] NEQA FILE_QUEUE) DO  ! Stop when we get back to header
;  404     0463  3          BEGIN
;  405     0464  3          FCB = FCB [FCB$R_FCB] + FCB$K_BLN;      ! Set correct FCB origin
;  406     0465  3          IF .FCB [FCB$V_PROMPT_ENABLE] AND
;  407     0466  3              .FCB [FCB$V_GENERATION] AND
;  408     0467  3              NOT .FCB [FCB$V_DEALLOC]
;  409     0468  3          THEN
;  410     0469  4              BEGIN
;  411     0470  4              LOCAL
;  412     0471  4                  PFV: REF $PAS$PFV_FILE_VARIABLE;        ! Pascal File Variable
;  413     0472  4              PFV = .FCB [FCB$A_PFV];     ! Get file variable
;  414     0473  4              IF PFV [PFV$R_PFV] NEQA 0
;  415     0474  4              THEN
;  416     0475  4                  IF TESTBITCS (PFV [PFV$V_LOCK]) ! Test and set file lock
;  417     0476  4                  THEN
;  418     0477  5                      BEGIN
;  419     0478  5                      !+
;  420     0479  5                      ! File is locked.  See if it is in Generation mode
;  421     0480  5                      ! and has a partial line in the buffer.  If so, call
;  422     0481  5                      ! PAS$$PROMPT_FILE to output the prompt.
;  423     0482  5                      !-
;  424     0483  5
;  425     0484  5                      IF .FCB [FCB$V_GENERATION] AND
;  426     0485  6                          (.FCB [FCB$A_RECORD_CUR] NEQA .FCB [FCB$A_RECORD_BEG])
;  427     0486  5                      THEN
;  428     0487  5                          PAS$$PROMPT_FILE (PFV [PFV$R_PFV], FCB [FCB$R_FCB]);
;  429     0488  5
;  430     0489  5                      !+
;  431     0490  5                      ! Unlock file.
;  432     0491  5                      !-
;  433     0492  5
;  434     0493  5                      PFV [PFV$V_LOCK] = 0;
;  435     0494  4                      END;
;  436     0495  4
;  437     0496  3              END;
;  438     0497  3
;  439     0498  3          !+
;  440     0499  3          ! Get next file from queue.
;  441     0500  3          !-
```

```
;  442          0501  3
;  443          0502  3          FCB = .FCB [FCB$L_QUEUE_FLINK];
;  444          0503  3          END;
;  445          0504  2
;  446          0505  2      !+
;  447          0506  2      ! Decrement REQUEST_LEVEL.
;  448          0507  2      !-
;  449          0508  2
;  450          0509  2      REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  451          0510  2
;  452          0511  2      !+
;  453          0512  2      ! If a remove request has been made, service it.
;  454          0513  2      !-
;  455          0514  2
;  456          0515  2      IF .REMOVE_REQUESTED
;  457          0516  2      THEN
;  458          0517  2          SERVICE_REQUEST ();
;  459          0518  2
;  460          0519  2      RETURN;
;  461          0520  2
;  462          0521  1      END;                                    ! End of routine PAS$$PROMPT_ALL


                                                                     .EXTRN  PAS$$BUGCHECK

                                                00C4 00000           .ENTRY  PAS$$PROMPT_ALL, Save R2,R6,R7                  ; 0388
                                    52 00000000'  EF  9E 00002       MOVAB   REQUEST_LEVEL, R2                               ;
                                    0A        04  A2  E8 00009       BLBS    QUEUE_INITIALIZED, 1$                           ; 0442
                                                  01  DD 0000D       PUSHL   #1                                              ; 0444
                                00000000G   00        01  FB 0000F       CALLS   #1, PAS$$BUGCHECK                           ;
                                                      04  00016       RET                                                     ;
                                                      62  D6 00017 1$:   INCL    REQUEST_LEVEL                               ; 0450
                                            57        F8  A2  D0 00019       MOVL    FILE_QUEUE, FCB                         ; 0456
                                            50        F8  A2  9E 0001D 2$:   MOVAB   FILE_QUEUE, R0                          ; 0462
                                            50            57  D1 00021       CMPL    FCB, R0                                 ;
                                                          38  13 00024       BEQL    5$                                      ;
                                            57        44  A7  9E 00026       MOVAB   68(R7), FCB                             ; 0464
                                29          FD        A7      06  E1 0002A       BBC     #6, -3(FCB), 4$                     ; 0465
                                24          FD        A7      04  E1 0002F       BBC     #4, -3(FCB), 4$                     ; 0466
                                1F          FE        A7      01  E0 00034       BBS     #1, -2(FCB), 4$                     ; 0467
                                            56        DC  A7  D0 00039       MOVL    -36(FCB), PFV                           ; 0472
                                                          19  13 0003D       BEQL    4$                                      ; 0473
                                14          04        A6      1F  E2 0003F       BBSS    #31, 4(PFV), 4$                     ; 0475
                                0A          FD        A7      04  E1 00044       BBC     #4, -3(FCB), 3$                     ; 0484
                                            E8        A7  EC  A7  D1 00049       CMPL    -20(FCB), -24(FCB)                      ; 0485
                                                          03  13 0004E       BEQL    3$                                      ;
                                                    0000V 30  00050       BSBW    PAS$$PROMPT_FILE                            ; 0487
                                            07        A6  80  8F  8A 00053 3$:   BICB2   #128, 7(PFV)                        ; 0493
                                            57        BC  A7  D0 00058 4$:   MOVL    -68(FCB), FCB                           ; 0502
                                                          BF  11 0005C       BRB     2$                                      ; 0462
                                                          62  D7 0005E 5$:   DECL    REQUEST_LEVEL                               ; 0509
                                            05        08  A2  E9 00060       BLBC    REMOVE_REQUESTED, 6$                    ; 0515
                                      0000V CF                00  FB 00064       CALLS   #0, SERVICE_REQUEST                 ; 0517
                                                              04  00069 6$:   RET                                             ; 0521

; Routine Size:  106 bytes,    Routine Base:  _PAS$CODE + 00A9
```

```
;  463          0522  1
;  464          0523  1 !<BLF/PAGE>
```

```
;  466     0524  1 %SBTTL 'PAS$$PROMPT_FILE - Prompt on a prompt-enabled files'
;  467     0525  1 GLOBAL ROUTINE PAS$$PROMPT_FILE (
;  468     0526  1     PFV: REF $PAS$PFV_FILE_VARIABLE,            ! Pascal File Variable
;  469     0527  1     FCB: REF $PAS$FCB_CONTROL_BLOCK             ! File Control Block
;  470     0528  1     ) : JSB_PROMPT_FILE NOVALUE =
;  471     0529  1
;  472     0530  1 !++
;  473     0531  1 ! FUNCTIONAL DESCRIPTION:
;  474     0532  1 !
;  475     0533  1 !       Performs a partial-line write on a prompt-enabled file.
;  476     0534  1 !
;  477     0535  1 ! CALLING SEQUENCE:
;  478     0536  1 !
;  479     0537  1 !       PAS$$PROMPT_FILE (PFV.mr.r, FCB.mr.r)
;  480     0538  1 !
;  481     0539  1 ! FORMAL PARAMETERS:
;  482     0540  1 !
;  483     0541  1 !       PFV             - The Pascal File Variable for the file.
;  484     0542  1 !
;  485     0543  1 !       FCB             - The File Control Block for the file.
;  486     0544  1 !
;  487     0545  1 ! IMPLICIT INPUTS:
;  488     0546  1 !
;  489     0547  1 !       It is assumed that the file is a prompt-enabled textfile which
;  490     0548  1 !       is locked and in Generation mode.
;  491     0549  1 !
;  492     0550  1 ! IMPLICIT OUTPUTS:
;  493     0551  1 !
;  494     0552  1 !       NONE
;  495     0553  1 !
;  496     0554  1 ! COMPLETION STATUS:
;  497     0555  1 !
;  498     0556  1 !       NONE
;  499     0557  1 !
;  500     0558  1 ! SIDE EFFECTS:
;  501     0559  1 !
;  502     0560  1 !       A partial line is written to the file, with the cursor left at
;  503     0561  1 !       the end of the text written.
;  504     0562  1 !
;  505     0563  1 ! SIGNALLED ERRORS:
;  506     0564  1 !
;  507     0565  1 !       ERRDURPRO - error during prompting
;  508     0566  1 !--
;  509     0567  1
;  510     0568  2     BEGIN
;  511     0569  2
;  512     0570  2     LOCAL
;  513     0571  2         CHARS_IN_LINE;                          ! Number of characters in the line
;  514     0572  2
;  515     0573  2     BIND
;  516     0574  2         RAB = FCB: REF BLOCK [, BYTE];          ! RAB is FCB
;  517     0575  2
;  518     0576  2     !+
;  519     0577  2     ! If the record has any characters in it, write the partial line.
;  520     0578  2     !-
;  521     0579  2
;  522     0580  2     CHARS_IN_LINE = .FCB [FCB$A_RECORD_CUR] - .FCB [FCB$A_RECORD_BEG];
```

```
;  523          0581  2      IF .CHARS_IN_LINE NEQ 0
;  524          0582  2      THEN
;  525          0583  3          BEGIN
;  526          0584  3          !+
;  527          0585  3          ! Set up record pointer in RAB for $PUT.
;  528          0586  3          !-
;  529          0587  3
;  530          0588  3          RAB [RAB$L_RBF] = .FCB [FCB$A_RECORD_BEG];
;  531          0589  3          RAB [RAB$W_RSZ] = .CHARS_IN_LINE;
;  532          0590  3
;  533          0591  3          !+
;  534          0592  3          ! Set carriagecontrol depending on whether a partial
;  535          0593  3          ! line has been previously written.
;  536          0594  3          !-
;  537          0595  3
;  538          0596  3          IF .FCB [FCB$V_PARTIAL_LINE]
;  539          0597  3          THEN
;  540          0598  3              FCB [FCB$W_PROMPT_CC] = FCB$K_CC_NULL       ! Nothing before, nothing
;  541          0599  3          ELSE
;  542          0600  3              FCB [FCB$W_PROMPT_CC] = FCB$K_CC_LFNL;      ! LF before, nothing after
;  543          0601  3
;  544          0602  3          !+
;  545          0603  3          ! Do the $PUT and check for errors.
;  546          0604  3          !-
;  547          0605  3
;  548          0606  4          IF NOT $PAS$RMS_OP ($PUT (RAB=.RAB))
;  549          0607  3          THEN
;  550          0608  3              $PAS$IO_ERROR (PAS$_ERRDURPRO);
;  551          0609  3
;  552          0610  3          !+
;  553          0611  3          ! Reset the record buffer.
;  554          0612  3          !-
;  555          0613  3
;  556          0614  3          FCB [FCB$A_RECORD_CUR] = .FCB [FCB$A_RECORD_BEG];
;  557          0615  3          FCB [FCB$V_PARTIAL_LINE] = 1;
;  558          0616  3
;  559          0617  2          END;
;  560          0618  2
;  561          0619  2      RETURN;
;  562          0620  2
;  563          0621  1      END;                                    ! End of routine PAS$$PROMPT_FILE


                                                     .EXTRN  SYS$PUT, PAS$$SIGNAL
                                                     .EXTRN  PAS$K_ERRDURPRO

                50       EC   A7       E8   A7  C3 00000 PAS$$PROMPT_FILE::
                                                     SUBL3   -24(FCB), -20(FCB), CHARS_IN_LINE       ; 0580
                                              49 13 00006                                            ; 0581
                         28   A7       E8   A7  D0 00008                                            ; 0588
                         22   A7            50  B0 0000D                                            ; 0589
                                        FD   A7  95 00011                                            ; 0596
                                              05 18 00014                                            ;
                                        FA   A7  B4 00016                                            ; 0598
                                              04 11 00019                                            ;
                         FA   A7            01  B0 00018 1$:                                        ; 0600
```

```
                                                 57  DD 0001F 2$:     PUSHL   FCB                                     ; 0606
                          00000000G   00         01  FB 00021         CALLS   #1, SYS$PUT
                                      1C         50  E8 00028         BLBS    $$STATUS, 4$
                          0001825A    8F         50  D1 0002B         CMPL    $$STATUS, #98906
                                                 04  12 00032         BNEQ    3$
                                      E7    FF   A7  E8 00034         BLBS    -1(FCB), 2$
                                      0C         50  E8 00038 3$:      BLBS    $$STATUS, 4$
                                      7E    00G  8F  9A 0003B         MOVZBL  #PAS$K_ERRDURPRO, -(SP)                 ; 0608
                          00000000G   00         01  FB 0003F         CALLS   #1, PAS$$SIGNAL
                                                 05  00046         RSB
                                EC    A7   E8   A7  D0 00047 4$:      MOVL    -24(FCB), -20(FCB)                      ; 0614
                                FD    A7   80   8F  88 0004C         BISB2   #128, -3(FCB)                           ; 0615
                                                 05  00051 5$:      RSB                                             ; 0621

; Routine Size:  82 bytes,    Routine Base:  _PAS$CODE + 0113

;  564          0622  1
;  565          0623  1 !<BLF/PAGE>
```

```
;   567           0624  1 %SBTTL 'PAS$$CLOSE_ALL - Close all open files'
;   568           0625  1 GLOBAL ROUTINE PAS$$CLOSE_ALL
;   569           0626  1     : NOVALUE =
;   570           0627  1
;   571           0628  1 !++
;   572           0629  1 ! FUNCTIONAL DESCRIPTION:
;   573           0630  1 !
;   574           0631  1 !       Closes all open files.  This procedure is called from the exit
;   575           0632  1 !       handler declared by PAS$$OPEN.
;   576           0633  1 !
;   577           0634  1 ! CALLING SEQUENCE:
;   578           0635  1 !
;   579           0636  1 !       PAS$$CLOSE_ALL ()
;   580           0637  1 !
;   581           0638  1 ! FORMAL PARAMETERS:
;   582           0639  1 !
;   583           0640  1 !       NONE
;   584           0641  1 !
;   585           0642  1 ! IMPLICIT INPUTS:
;   586           0643  1 !
;   587           0644  1 !       FILE_QUEUE
;   588           0645  1 !
;   589           0646  1 ! IMPLICIT OUTPUTS:
;   590           0647  1 !
;   591           0648  1 !       NONE
;   592           0649  1 !
;   593           0650  1 ! COMPLETION STATUS:
;   594           0651  1 !
;   595           0652  1 !       NONE
;   596           0653  1 !
;   597           0654  1 ! SIDE EFFECTS:
;   598           0655  1 !
;   599           0656  1 !       Closes all open files, and removes their control blocks
;   600           0657  1 !       from the queue.
;   601           0658  1 !
;   602           0659  1 ! SIGNALLED ERRORS:
;   603           0660  1 !
;   604           0661  1 !       NONE
;   605           0662  1 !--
;   606           0663  1
;   607           0664  2     BEGIN
;   608           0665  2
;   609           0666  2     LOCAL
;   610           0667  2         FCB: REF $PAS$FCB_CONTROL_BLOCK,        ! File control block
;   611           0668  2         DUMMY_PFV: $PAS$PFV_FILE_VARIABLE,      ! Dummy PFV for local use
;   612           0669  2         AST_STATUS;                             ! Status from $SETAST
;   613           0670  2
;   614           0671  2     BUILTIN
;   615           0672  2         REMQUE;
;   616           0673  2
;   617           0674  2     !+
;   618           0675  2     ! If queue not initialized, nothing to close.
;   619           0676  2     !-
;   620           0677  2
;   621           0678  2     IF NOT .QUEUE_INITIALIZED
;   622           0679  2     THEN
;   623           0680  2         RETURN;
```

```
;  624          0681  2
;  625          0682  2      !+
;  626          0683  2      ! Set up dummy PFV.  We will use this to close files since
;  627          0684  2      ! the true PFV may be invalid.
;  628          0685  2      !-
;  629          0686  2
;  630          0687  2      DUMMY_PFV [PFV$W_FLAGS] = 0;
;  631          0688  2
;  632          0689  2      !+
;  633          0690  2      ! Disable ASTs
;  634          0691  2      !-
;  635          0692  2
;  636          0693  2      AST_STATUS = $SETAST (ENBFLG=0);
;  637          0694  2
;  638          0695  2      !+
;  639          0696  2      ! Remove all files from the queue, and close those still open.
;  640          0697  2      !-
;  641          0698  2
;  642          0699  2      UNTIL (REMQUE (.FILE_QUEUE [0], FCB)) DO    ! True when REMQUE fails
;  643          0700  3          BEGIN
;  644          0701  3          FCB = FCB [FCB$R_FCB] + FCB$K_BLN;              ! Get correct FCB origin
;  645          0702  3          IF NOT .FCB [FCB$V_DEALLOC]
;  646          0703  3          THEN
;  647          0704  4              BEGIN
;  648          0705  4              !+
;  649          0706  4              ! Use dummy PFV to do the close.
;  650          0707  4              !-
;  651          0708  4              DUMMY_PFV [PFV$A_FCB] = FCB [FCB$R_FCB];
;  652          0709  4              DUMMY_PFV [PFV$A_PFD] = .FCB [FCB$A_PFD];
;  653          0710  4              DUMMY_PFV [PFV$V_FCB_VALID] = 1;
;  654          0711  4              DO_CLOSE (DUMMY_PFV [PFV$R_PFV]);   ! Close the file
;  655          0712  3              END;
;  656          0713  2          END;
;  657          0714  2
;  658          0715  2      !+
;  659          0716  2      ! If ASTs were previously enabled, reenable them.
;  660          0717  2      !-
;  661          0718  2
;  662          0719  2      IF .AST_STATUS EQL SS$_WASSET
;  663          0720  2      THEN
;  664          0721  2          $SETAST (ENBFLG = 1);
;  665          0722  2
;  666          0723  2      RETURN;
;  667          0724  2
;  668          0725  1      END;                                    ! End of routine PAS$$CLOSE_ALL


                                                .EXTRN  SYS$SETAST

                                    001C 00000  .ENTRY  PAS$$CLOSE_ALL, Save R2,R3,R4          ; 0625
54 00000000G    00    9E 00002  MOVAB   SYS$SETAST, R4                                       ;
5E              10    C2 00009  SUBL2   #16, SP                                              ;
3E 00000000'    EF    E9 0000C  BLBC    QUEUE_INITIALIZED, 3$                              ; 0678
                06    AE B4 00013  CLRW    DUMMY_PFV+6                                      ; 0687
                      7E D4 00016  CLRL    -(SP)                                            ; 0693
64                    01 FB 00018  CALLS   #1, SYS$SETAST                                   ;
```

```
                                53                50  DO 0001B        MOVL    RO, AST_STATUS                          ;
                                52 00000000'      FF  0F 0001E 1$:    REMQUE  @FILE_QUEUE, FCB                        ; 0699
                                                  20  1D 00025        BVS     2$                                      ;
                                52         44     A2  9E 00027        MOVAB   68(R2), FCB                             ; 0701
                        EE      FE         A2     01  E0 0002B        BBS     #1, -2(FCB), 1$                         ; 0702
                                0C         AE     52  D0 00030        MOVL    FCB, DUMMY_PFV+12                       ; 0708
                                08         AE     E4  A2  D0 00034    MOVL    -28(FCB), DUMMY_PFV+8                   ; 0709
                                07         AE     40  8F  88 00039    BISB2   #64, DUMMY_PFV+7                        ; 0710
                                                  5E  DD 0003E        PUSHL   SP                                      ; 0711
                              0000V CF            01  FB 00040        CALLS   #1, DO_CLOSE                            ;
                                                  D7  11 00045        BRB     1$                                      ; 0699
                                09                53  D1 00047 2$:    CMPL    AST_STATUS, #9                          ; 0719
                                                  05  12 0004A        BNEQ    3$                                      ;
                                                  01  DD 0004C        PUSHL   #1                                      ; 0721
                                64                01  FB 0004E        CALLS   #1, SYS$SETAST                          ;
                                                      04 00051 3$:    RET                                             ; 0725

; Routine Size:  82 bytes,    Routine Base:  _PAS$CODE + 0165

;  669          0726  1
;  670          0727  1 !<BLF/PAGE>
```

```
;  672          0728  1 %SBTTL 'PAS$CLOSE_LOCAL_R3 - Close local files'
;  673          0729  1 GLOBAL ROUTINE PAS$CLOSE_LOCAL_R3
;  674          0730  1       : JSB_CLOSE_LOCAL NOVALUE =
;  675          0731  1
;  676          0732  1 !++
;  677          0733  1 ! FUNCTIONAL DESCRIPTION:
;  678          0734  1 !
;  679          0735  1 !       Closes all open files which were declared local by our caller.
;  680          0736  1 !
;  681          0737  1 ! CALLING SEQUENCE:
;  682          0738  1 !
;  683          0739  1 !       JSB PAS$CLOSE_LOCAL_R3
;  684          0740  1 !
;  685          0741  1 ! FORMAL PARAMETERS:
;  686          0742  1 !
;  687          0743  1 !       NONE
;  688          0744  1 !
;  689          0745  1 ! IMPLICIT INPUTS:
;  690          0746  1 !
;  691          0747  1 !       Current FP (Caller's)
;  692          0748  1 !
;  693          0749  1 ! IMPLICIT OUTPUTS:
;  694          0750  1 !
;  695          0751  1 !       NONE
;  696          0752  1 !
;  697          0753  1 ! COMPLETION STATUS:
;  698          0754  1 !
;  699          0755  1 !       NONE
;  700          0756  1 !
;  701          0757  1 ! SIDE EFFECTS:
;  702          0758  1 !
;  703          0759  1 !       Preserves registers 0 and 1.
;  704          0760  1 !       See PAS$$CLOSE_LOCAL
;  705          0761  1 !
;  706          0762  1 ! SIGNALLED ERRORS:
;  707          0763  1 !
;  708          0764  1 !       NONE
;  709          0765  1 !--
;  710          0766  1
;  711          0767  2     BEGIN
;  712          0768  2
;  713          0769  2     BUILTIN
;  714          0770  2         FP;
;  715          0771  2
;  716          0772  2     !+
;  717          0773  2     ! Call PAS$$CLOSE_LOCAL with one argument, the current FP.  This
;  718          0774  2     ! will get pushed on the stack.
;  719          0775  2     !-
;  720          0776  2
;  721          0777  2     PAS$$CLOSE_LOCAL (.FP);
;  722          0778  2
;  723          0779  2     RETURN;
;  724          0780  2
;  725          0781  1     END;                                    ! End of routine PAS$$CLOSE_LOCAL_R3
```

```
                                          5D  DD 00000 PAS$CLOSE_LOCAL_R3::
                                                        PUSHL   FP                              ; 0777
                                        0000V 30 00002  BSBW    PAS$$CLOSE_LOCAL
                                     5E   04  C0 00005  ADDL2   #4, SP
                                              05 00008  RSB                                   ; 0781

; Routine Size:  9 bytes,    Routine Base:  _PAS$CODE + 01B7

;  726          0782  1
;  727          0783  1 !<BLF/PAGE>
```

```
;  729     0784  1 %SBTTL 'PAS$$CLOSE_LOCAL - Close local files'
;  730     0785  1 GLOBAL ROUTINE PAS$$CLOSE_LOCAL (PROCEDURE_FP)
;  731     0786  1       : JSB_CLOSE_LOCAL NOVALUE =
;  732     0787  1
;  733     0788  1 !++
;  734     0789  1 ! FUNCTIONAL DESCRIPTION:
;  735     0790  1 !
;  736     0791  1 !       Closes all open files which were declared local by our caller.
;  737     0792  1 !
;  738     0793  1 ! CALLING SEQUENCE:
;  739     0794  1 !
;  740     0795  1 !       JSB PAS$$CLOSE_LOCAL (PROCEDURE_FP.rlu.v)
;  741     0796  1 !
;  742     0797  1 ! FORMAL PARAMETERS:
;  743     0798  1 !
;  744     0799  1 !       PROCEDURE_FP - This is the frame pointer of the procedure for
;  745     0800  1 !                      which we are closing its local files.  This
;  746     0801  1 !                      value is passed on the stack.
;  747     0802  1 !
;  748     0803  1 ! IMPLICIT INPUTS:
;  749     0804  1 !
;  750     0805  1 !       Our SP
;  751     0806  1 !       FILE_QUEUE
;  752     0807  1 !       REQUEST_LEVEL
;  753     0808  1 !       QUEUE_INITIALIZED
;  754     0809  1 !       REMOVE_REQUESTED
;  755     0810  1 !
;  756     0811  1 ! IMPLICIT OUTPUTS:
;  757     0812  1 !
;  758     0813  1 !       NONE
;  759     0814  1 !
;  760     0815  1 ! COMPLETION STATUS:
;  761     0816  1 !
;  762     0817  1 !       NONE
;  763     0818  1 !
;  764     0819  1 ! SIDE EFFECTS:
;  765     0820  1 !
;  766     0821  1 !       Closes all open files whose PFVs are between PROCEDURE_FP and SP
;  767     0822  1 !       (i.e. declared locally in our caller's procedure).
;  768     0823  1 !
;  769     0824  1 ! SIGNALLED ERRORS:
;  770     0825  1 !
;  771     0826  1 !       NONE
;  772     0827  1 !--
;  773     0828  1
;  774     0829  2     BEGIN
;  775     0830  2
;  776     0831  2     LOCAL
;  777     0832  2         FCB: REF $PAS$FCB_CONTROL_BLOCK,        ! File control block
;  778     0833  2         NEXT_FCB,                               ! Next FCB in QUEUE
;  779     0834  2         REMQUE_OK;                              ! TRUE if ok to do REMQUEs
;  780     0835  2
;  781     0836  2     BUILTIN
;  782     0837  2         REMQUE,
;  783     0838  2         SP;
;  784     0839  2
;  785     0840  2     !+
```

```
;  786          0841  2      ! If queue not initialized, nothing to close.
;  787          0842  2      !-
;  788          0843  2
;  789          0844  2      IF NOT .QUEUE_INITIALIZED
;  790          0845  2      THEN
;  791          0846  2          RETURN;
;  792          0847  2
;  793          0848  2      !+
;  794          0849  2      ! Increment REQUEST_LEVEL and set REMQUE_OK appropriately.
;  795          0850  2      !-
;  796          0851  2
;  797          0852  2      IF (REQUEST_LEVEL = .REQUEST_LEVEL + 1) NEQ 0
;  798          0853  2      THEN
;  799          0854  2          REMQUE_OK = 0
;  800          0855  2      ELSE
;  801          0856  2          REMQUE_OK = 1;
;  802          0857  2
;  803          0858  2      !+
;  804          0859  2      ! Get the first FCB from the queue.
;  805          0860  2      !-
;  806          0861  2
;  807          0862  2      FCB = .FILE_QUEUE [0];              ! Forward link
;  808          0863  2
;  809          0864  2      !+
;  810          0865  2      ! While there are files left, look for local files to close.
;  811          0866  2      !-
;  812          0867  2
;  813          0868  2      WHILE (FCB [FCB$R_FCB] NEQA FILE_QUEUE) DO  ! Stop when we get back to header
;  814          0869  3          BEGIN
;  815          0870  3          FCB = FCB [FCB$R_FCB] + FCB$K_BLN;      ! Get correct FCB origin
;  816          0871  3          NEXT_FCB = .FCB [FCB$L_QUEUE_FLINK];    ! Next file in queue
;  817          0872  3          IF NOT .FCB [FCB$V_DEALLOC] AND NOT .FCB [FCB$V_STATIC]
;  818          0873  3          THEN
;  819          0874  4              BEGIN
;  820          0875  4              LOCAL
;  821          0876  4                  PFV: REF $PAS$PFV_FILE_VARIABLE;
;  822          0877  4              PFV = .FCB [FCB$A_PFV];     ! Get PFV
;  823          0878  4              IF PFV [PFV$R_PFV] LSSA .PROCEDURE_FP AND PFV [PFV$R_PFV] GTRA .SP
;  824          0879  4              THEN
;  825          0880  5                  BEGIN
;  826          0881  5                  !+
;  827          0882  5                  ! We have a local file.  We can't be guaranteed that the
;  828          0883  5                  ! contents of the PFV are valid, so set the necessary items
;  829          0884  5                  ! here.  Close the file.
;  830          0885  5                  !-
;  831          0886  5
;  832          0887  5                  PFV [PFV$W_FLAGS] = 0;
;  833          0888  5                  PFV [PFV$V_LOCK] = 1;
;  834          0889  5                  PFV [PFV$V_FCB_VALID] = 1;
;  835          0890  5                  PFV [PFV$A_FCB] = FCB [FCB$R_FCB];
;  836          0891  5                  PFV [PFV$A_PFD] = .FCB [FCB$A_PFD];
;  837          0892  5                  DO_CLOSE (PFV [PFV$R_PFV]);
;  838          0893  5
;  839          0894  5                  !+
;  840          0895  5                  ! Remove the file from the queue.  This will either be
;  841          0896  5                  ! a REMQUE or a request to remove.
;  842          0897  5                  !-
```

```
;  843          0898  5
;  844          0899  5                    IF .REMQUE_OK
;  845          0900  5                    THEN
;  846          0901  6                        BEGIN
;  847          0902  6                        LOCAL
;  848          0903  6                            ITEM_ADDR;                          ! Output from REMQUE
;  849          0904  6                        REMQUE (FCB [FCB$L_QUEUE_FLINK], ITEM_ADDR);
;  850          0905  6                        PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, ITEM_ADDR);
;  851          0906  6                        END
;  852          0907  5                    ELSE
;  853          0908  6                        BEGIN
;  854          0909  6                        FCB [FCB$V_DEALLOC] = 1;
;  855          0910  6                        REMOVE_REQUESTED = 1;
;  856          0911  5                        END;
;  857          0912  4                    END;
;  858          0913  3                END;
;  859          0914  3            !+
;  860          0915  3            ! Get next FCB from queue.
;  861          0916  3            !-
;  862          0917  3            FCB = .NEXT_FCB;
;  863          0918  2            END;
;  864          0919  2
;  865          0920  2        !+
;  866          0921  2        ! Decrement REQUEST_LEVEL.
;  867          0922  2        !-
;  868          0923  2
;  869          0924  2        REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  870          0925  2
;  871          0926  2        !+
;  872          0927  2        ! If a remove request has been made, service it.
;  873          0928  2        !-
;  874          0929  2
;  875          0930  2        IF .REMOVE_REQUESTED
;  876          0931  2        THEN
;  877          0932  2            SERVICE_REQUEST ();
;  878          0933  2
;  879          0934  2        RETURN;
;  880          0935  2
;  881          0936  1        END;                                    ! End of routine PAS$$CLOSE_LOCAL


                                03  BB 00000 PAS$$CLOSE_LOCAL::
                                              PUSHR   #^M<R0,R1>                        ;  0785
                     5E         08  C2 00002          SUBL2   #8, SP
                     03 00000000'  EF  E8 00005          BLBS    QUEUE_INITIALIZED, 1$ ;  0844
                              0099  31 0000C          BRW     8$
                        00000000'  EF  D6 0000F 1$:     INCL    REQUEST_LEVEL         ;  0852
                                   04  13 00015          BEQL    2$
                                   6E  D4 00017          CLRL    REMQUE_OK             ;  0854
                                   03  11 00019          BRB     3$
                     6E            01  D0 0001B 2$:     MOVL    #1, REMQUE_OK         ;  0856
                     52 00000000'  EF  D0 0001E 3$:     MOVL    FILE_QUEUE, FCB       ;  0862
                     50 00000000'  EF  9E 00025 4$:     MOVAB   FILE_QUEUE, R0        ;  0868
                     50            52  D1 0002C          CMPL    FCB, R0               ;
```

```
                                   65  13 0002F        BEQL    7$                          :
                      52     44    A2  9E 00031        MOVAB   68(R2), FCB                 : 0870
                      53     BC    A2  D0 00035        MOVL    -68(FCB), NEXT_FCB          : 0871
          53     FE   A2           01  E0 00039        BBS     #1, -2(FCB), 6$             : 0872
          4E     F8   A2           06  E0 0003E        BBS     #6, -8(FCB), 6$             :
                      50     DC    A2  D0 00043        MOVL    -36(FCB), PFV               : 0877
                14    AE           50  D1 00047        CMPL    PFV, PROCEDURE_FP           : 0878
                                   44  1E 0004B        BGEQU   6$                          :
                      5E           50  D1 0004D        CMPL    PFV, SP                     :
                                   3F  1B 00050        BLEQU   6$                          :
                             06    A0  B4 00052        CLRW    6(PFV)                      : 0887
                07    A0     C0    8F  88 00055        BISB2   #192, 7(PFV)                : 0889
                0C    A0           52  D0 0005A        MOVL    FCB, 12(PFV)                : 0890
                08    A0     E4    A2  D0 0005E        MOVL    -28(FCB), 8(PFV)            : 0891
                                   50  DD 00063        PUSHL   PFV                         : 0892
             0000V    CF           01  FB 00065        CALLS   #1, DO_CLOSE                :
                      19           6E  E9 0006A        BLBC    REMQUE_OK, 5$               : 0899
                      50     BC    A2  9E 0006D        MOVAB   -68(FCB), R0                : 0904
                04    AE           60  0F 00071        REMQUE  (R0), ITEM_ADDR             :
                             04    AE  9F 00075        PUSHAB  ITEM_ADDR                   : 0905
                      7E   0138    8F  3C 00078        MOVZWL  #312, -(SP)                 :
        00000000G     00           02  FB 0007D        CALLS   #2, PAS$$FREE_VM            :
                                   0B  11 00084        BRB     6$                          : 0899
                FE    A2           02  88 00086 5$:    BISB2   #2, -2(FCB)                 : 0909
        00000000'     EF           01  D0 0008A        MOVL    #1, REMOVE_REQUESTED        : 0910
                      52           53  D0 00091 6$:    MOVL    NEXT_FCB, FCB               : 0917
                                   8F  11 00094        BRB     4$                          : 0868
                       00000000'   EF  D7 00096 7$:    DECL    REQUEST_LEVEL               : 0924
                    05 00000000'   EF  E9 0009C        BLBC    REMOVE_REQUESTED, 8$        : 0930
             0000V    CF           00  FB 000A3        CALLS   #0, SERVICE_REQUEST         : 0932
                      5E           08  C0 000A8 8$:    ADDL2   #8, SP                      : 0936
                                   03  BA 000AB        POPR    #^M<R0,R1>                  :
                                       05 000AD        RSB                                 :

; Routine Size:  174 bytes,    Routine Base:  _PAS$CODE + 01C0

;   882           0937  1
;   883           0938  1 !<BLF/PAGE>
```

```
;  885     0939  1 %SBTTL 'DO_CLOSE - Close a file'
;  886     0940  1 ROUTINE DO_CLOSE (                              ! Close a file
;  887     0941  1         PFV: REF $PAS$PFV_FILE_VARIABLE         ! File variable
;  888     0942  1     ): NOVALUE =
;  889     0943  1
;  890     0944  1 !++
;  891     0945  1 ! FUNCTIONAL DESCRIPTION:
;  892     0946  1 !
;  893     0947  1 !       This routine closes a Pascal file.  This entry is called from
;  894     0948  1 !       PAS$$CLOSE_ALL and PAS$CLOSE_LOCAL.  It is different from
;  895     0949  1 !       PAS$CLOSE2 only in that it does not call PAS$$REMOVE_FILE to
;  896     0950  1 !       remove the FCB from the list of open files.
;  897     0951  1 !
;  898     0952  1 ! CALLING SEQUENCE:
;  899     0953  1 !
;  900     0954  1 !       CALL DO_CLOSE (PFV.mr.r)
;  901     0955  1 !
;  902     0956  1 ! FORMAL PARAMETERS:
;  903     0957  1 !
;  904     0958  1 !       PFV             - The Pascal File Variable (PFV) passed by reference.
;  905     0959  1 !                         The structure of the PFV is defined in PASPFV.REQ.
;  906     0960  1 !
;  907     0961  1 ! IMPLICIT INPUTS:
;  908     0962  1 !
;  909     0963  1 !       NONE
;  910     0964  1 !
;  911     0965  1 ! IMPLICIT OUTPUTS:
;  912     0966  1 !
;  913     0967  1 !       NONE
;  914     0968  1 !
;  915     0969  1 ! ROUTINE VALUE:
;  916     0970  1 !
;  917     0971  1 !       NONE
;  918     0972  1 !
;  919     0973  1 ! SIDE EFFECTS:
;  920     0974  1 !
;  921     0975  1 !       See PAS$$CLOSE
;  922     0976  1 !
;  923     0977  1 ! SIGNALLED ERRORS:
;  924     0978  1 !
;  925     0979  1 !       ERRDURCLO - error during CLOSE
;  926     0980  1 !
;  927     0981  1 !--
;  928     0982  1
;  929     0983  2     BEGIN
;  930     0984  2
;  931     0985  2     LOCAL
;  932     0986  2         PFV_ADDR: VOLATILE;                     ! Enable argument
;  933     0987  2
;  934     0988  2         !+
;  935     0989  2         ! Enable a local condition handler to intercept any signals from
;  936     0990  2         ! trying to close the file.
;  937     0991  2         !-
;  938     0992  2
;  939     0993  2         ENABLE
;  940     0994  2             DO_CLOSE_HANDLER (PFV_ADDR);
;  941     0995  2
```

```
;  942          0996  2      !+
;  943          0997  2      ! Lock PFV  We don't care if it is already locked.
;  944          0998  2      !-
;  945          0999  2
;  946          1000  2      PFV [PFV$V_LOCK] = 1;
;  947          1001  2
;  948          1002  2      !+
;  949          1003  2      ! Set PFV_ADDR enable argument.
;  950          1004  2      !-
;  951          1005  2
;  952          1006  2      PFV_ADDR = PFV [PFV$R_PFV];
;  953          1007  2
;  954          1008  2      !+
;  955          1009  2      ! Call PAS$$CLOSE to do the work.
;  956          1010  2      !-
;  957          1011  2
;  958          1012  2      PAS$$CLOSE (PFV [PFV$R_PFV]);
;  959          1013  2
;  960          1014  2      !+
;  961          1015  2      ! Invalidate information in PFV
;  962          1016  2      !-
;  963          1017  2
;  964          1018  2      PFV [PFV$V_FCB_VALID] = 0;
;  965          1019  2      PFV [PFV$A_FCB] = 0;
;  966          1020  2
;  967          1021  2      RETURN;
;  968          1022  2
;  969          1023  1      END;                                    ! End of routine DO_CLOSE


                                                .EXTRN  PAS$$CLOSE

                                        0004 00000 DO_CLOSE:
                                                .WORD   Save R2                         ;  0940
                                        7E  D4  00002           CLRL    PFV_ADDR        ;  0983
                                    6D  CF  001F    DE  00004   MOVAL   1$, (FP)        ;
                                    52  04  AC      D0  00009   MOVL    PFV, R2         ;  1000
                                07  A2  80  8F      88  0000D   BISB2   #128, 7(R2)     ;
                                    6E      52      D0  00012   MOVL    R2, PFV_ADDR    ;  1006
                                            52      DD  00015   PUSHL   R2              ;  1012
                            00000000G   00          01  FB  00017   CALLS   #1, PAS$$CLOSE   ;
                                07  A2      40      8F  8A  0001E   BICB2   #64, 7(R2)   ;  1018
                                        0C  A2      D4  00023   CLRL    12(R2)          ;  1019
                                            04      00026   RET                         ;  1023
                                        0000  00027 1$:     .WORD   Save nothing        ;  0983
                                    50  08  AC      D0  00029   MOVL    8(AP), R0       ;
                                    50  04  A0      D0  0002D   MOVL    4(R0), R0       ;
                                        FC  A0      9F  00031   PUSHAB  PFV_ADDR        ;
                                            01      DD  00034   PUSHL   #1              ;
                                            5E      DD  00036   PUSHL   SP              ;
                                    7E  04  AC      7D  00038   MOVQ    4(AP), -(SP)    ;
                                0000V   CF          03  FB  0003C   CALLS   #3, DO_CLOSE_HANDLER   ;
                                            04  00041           RET                     ;

; Routine Size:  66 bytes,    Routine Base:  _PAS$CODE + 026E
```

```
;  970          1024  1
;  971          1025  1 !<BLF/PAGE>
```

```
;  973          1026  1 %SBTTL 'DO_CLOSE_HANDLER - Error handler for DO_CLOSE'
;  974          1027  1 ROUTINE DO_CLOSE_HANDLER (
;  975          1028  1         SIGNAL_ARGS: REF BLOCK [, BYTE],        ! Signal arguments array
;  976          1029  1         MECH_ARGS: REF BLOCK [, BYTE],          ! Mechanism arguments array
;  977          1030  1         ENABLE_ARGS: REF VECTOR [, LONG]        ! Enable arguments array
;  978          1031  1     ) =
;  979          1032  1
;  980          1033  1 !++
;  981          1034  1 ! FUNCTIONAL DESCRIPTION:
;  982          1035  1 !
;  983          1036  1 !       This is the condition handler enabled by DO_CLOSE.
;  984          1037  1 !       If the current exception is a PAS$ message for the file
;  985          1038  1 !       our establisher was processing, intercept the signal, use
;  986          1039  1 !       $PUTMSG to display the message text, and unwind to our
;  987          1040  1 !       establisher's caller.
;  988          1041  1 !
;  989          1042  1 !       The reason for using $PUTMSG is that DO_CLOSE may be called
;  990          1043  1 !       from PAS$HANDLER during an unwind.  The current VAX
;  991          1044  1 !       condition handling architecture does not specify what happens
;  992          1045  1 !       when an exception occurs during an unwind, and the current
;  993          1046  1 !       implementation performs the search for handlers incorrectly.
;  994          1047  1 !       We are safe as long as we don't let the signal outside of the RTL.
;  995          1048  1 !
;  996          1049  1 ! CALLING SEQUENCE:
;  997          1050  1 !
;  998          1051  1 !       status.wlc.v = DO_CLOSE_HANDLER (SIGNAL_ARGS.rl.ra, MECH_ARGS.rl.ra
;  999          1052  1 !                                        , ENABLE_ARGS.rl.ra)
; 1000          1053  1 !
; 1001          1054  1 ! FORMAL PARAMETERS:
; 1002          1055  1 !
; 1003          1056  1 !       SIGNAL_ARGS     - The signal argument list.
; 1004          1057  1 !
; 1005          1058  1 !       MECH_ARGS       - The mechanism argument list.
; 1006          1059  1 !
; 1007          1060  1 !       ENABLE_ARGS     - An array with the following
; 1008          1061  1 !                         format:
; 1009          1062  1 !
; 1010          1063  1 !                               +----------------+
; 1011          1064  1 !                               |   ENB_COUNT    |  <-- ENABLE_ARGS
; 1012          1065  1 !                               +----------------+
; 1013          1066  1 !                               |  ENB_PFV_ADDR  |
; 1014          1067  1 !                               +----------------+
; 1015          1068  1 !
; 1016          1069  1 !                         ENB_COUNT is the count of following enable arguments.
; 1017          1070  1 !                         The count is always 1.
; 1018          1071  1 !
; 1019          1072  1 !                         ENB_PFV_ADDR - If non-zero, the address of a longword
; 1020          1073  1 !                         containing the PFV our establisher is operating on.
; 1021          1074  1 !
; 1022          1075  1 ! IMPLICIT INPUTS:
; 1023          1076  1 !
; 1024          1077  1 !       The signaller's PFV placed as the first FAO argument in the primary
; 1025          1078  1 !       signalled message.
; 1026          1079  1 !
; 1027          1080  1 ! IMPLICIT OUTPUTS:
; 1028          1081  1 !
; 1029          1082  1 !       May use $PUTMSG to write a message
```

```
;1030     1083  1 !
;1031     1084  1 ! ROUTINE VALUE:
;1032     1085  1 !
;1033     1086  1 !       SS$_RESIGNAL
;1034     1087  1 !
;1035     1088  1 ! SIDE EFFECTS:
;1036     1089  1 !
;1037     1090  1 !       May cause an unwind.
;1038     1091  1 !
;1039     1092  1 !--
;1040     1093  1
;1041     1094  2     BEGIN
;1042     1095  2
;1043     1096  2     LITERAL
;1044     1097  2         ENB_COUNT = 0,          ! Count of enable arguments
;1045     1098  2         ENB_PFV_ADDR = 1;       ! Address of address of PFV
;1046     1099  2
;1047     1100  2     BUILTIN
;1048     1101  2         ACTUALCOUNT;
;1049     1102  2
;1050     1103  2     !+
;1051     1104  2     ! Determine if this is an unwind.
;1052     1105  2     !-
;1053     1106  2
;1054     1107  2     IF .SIGNAL_ARGS [CHF$L_SIG_NAME] NEQU SS$_UNWIND
;1055     1108  2     THEN
;1056     1109  3         BEGIN
;1057     1110  3
;1058     1111  3         LOCAL
;1059     1112  3             COND_NAME: BLOCK [4, BYTE]; ! Primary condition name
;1060     1113  3
;1061     1114  3         !+
;1062     1115  3         ! Get primary condition name.
;1063     1116  3         !-
;1064     1117  3
;1065     1118  3         COND_NAME = .SIGNAL_ARGS [CHF$L_SIG_NAME];
;1066     1119  3
;1067     1120  3         !+
;1068     1121  3         ! Is this a PAS$ error?  If not, resignal.
;1069     1122  3         !-
;1070     1123  3
;1071     1124  3         IF .COND_NAME [STS$V_FAC_NO] NEQU PAS$_FACILITY
;1072     1125  3         THEN
;1073     1126  3             RETURN SS$_RESIGNAL;
;1074     1127  3
;1075     1128  3         !+
;1076     1129  3         ! See if the error message is one which is "trapped"
;1077     1130  3         ! by ERROR:=CONTINUE.  This is done by comparing the
;1078     1131  3         ! message number against a select range.
;1079     1132  3         !-
;1080     1133  3
;1081     1134  3         IF .COND_NAME [STS$V_CODE] GEQU PAS$$K_MSGCONTLO AND ! Lowest number
;1082     1135  3             .COND_NAME [STS$V_CODE] LEQU PAS$$K_MSGCONTHI
;1083     1136  3         THEN
;1084     1137  4             BEGIN
;1085     1138  4
;1086     1139  4             !+
```

```
; 1087      1140 4            ! See if the PFVs match.  The signaller's PFV is the
; 1088      1141 4            ! first FAO parameter in the primary message.
; 1089      1142 4            !-
; 1090      1143 4
; 1091      1144 4            IF .SIGNAL_ARGS [12,0,32,0] EQLA ..ENABLE_ARGS [ENB_PFV_ADDR]
; 1092      1145 4            THEN
; 1093      1146 5                BEGIN
; 1094      1147 5
; 1095      1148 5                !+
; 1096      1149 5                ! We want to use $PUTMSG to display the message, and then
; 1097      1150 5                ! unwind to our establisher's caller.  First, subtract two
; 1098      1151 5                ! from the signal argument count so that $PUTMSG doesn't see
; 1099      1152 5                ! the PC and PSL.
; 1100      1153 5                !-
; 1101      1154 5
; 1102      1155 5                SIGNAL_ARGS [CHF$L_SIG_ARGS] = .SIGNAL_ARGS [CHF$L_SIG_ARGS] - 2;
; 1103      1156 5                COND_NAME [STS$V_SEVERITY] = STS$K_ERROR;        ! Make E severity
; 1104      1157 5                SIGNAL_ARGS [CHF$L_SIG_NAME] = .COND_NAME;
; 1105      1158 5                $PUTMSG (MSGVEC = SIGNAL_ARGS [CHF$L_SIG_ARGS]);
; 1106      1159 5                SIGNAL_ARGS [CHF$L_SIG_ARGS] = .SIGNAL_ARGS [CHF$L_SIG_ARGS] + 2;
; 1107      1160 5
; 1108      1161 6                IF NOT $UNWIND ()
; 1109      1162 5                THEN
; 1110      1163 5                    $PAS$BUGCHECK (BUG_UNWINDFAIL);
; 1111      1164 4                END;
; 1112      1165 3            END;
; 1113      1166 2        END;
; 1114      1167 2
; 1115      1168 2    RETURN SS$_RESIGNAL;                          ! Resignal error
; 1116      1169 2
; 1117      1170 1    END;                                          ! End of routine DO_CLOSE_HANDLER


                                                        .EXTRN  PAS$_FACILITY, PAS$$K_MSGCONTLO
                                                        .EXTRN  PAS$$K_MSGCONTHI
                                                        .EXTRN  SYS$PUTMSG, SYS$UNWIND

                                    0004 00000 DO_CLOSE_HANDLER:
                                                        .WORD   Save R2                                     ; 1027
                          52        04  AC  D0 00002    MOVL    SIGNAL_ARGS, R2                             ; 1107
               00000920   8F        04  A2  D1 00006    CMPL    4(R2), #2336                                ;
                                        5F  13 0000E    BEQL    1$                                          ;
                          51        04  A2  D0 00010    MOVL    4(R2), COND_NAME                            ; 1118
      00G           51    0C            10  ED 00014    CMPZV   #16, #12, COND_NAME, S^PAS$_FACILITY        ; 1124
                                        54  12 00019    BNEQ    1$                                          ;
00000000G 8F        51    0C            03  ED 0001B    CMPZV   #3, #12, COND_NAME, #PAS$$K_MSGCONTLO       ; 1134
                                        49  1F 00024    BLSSU   1$                                          ;
00000000G 8F        51    0C            03  ED 00026    CMPZV   #3, #12, COND_NAME, #PAS$$K_MSGCONTHI       ; 1135
                                        3E  1A 0002F    BGTRU   1$                                          ;
                          50        0C  AC  D0 00031    MOVL    ENABLE_ARGS, R0                             ; 1144
                     04   B0        0C  A2  D1 00035    CMPL    12(R2), @4(R0)                              ;
                                        33  12 0003A    BNEQ    1$                                          ;
                          62            02  C2 0003C    SUBL2   #2, (R2)                                    ; 1155
      51            03    00            02  F0 0003F    INSV    #2, #0, #3, COND_NAME                       ; 1156
                     04   A2            51  D0 00044    MOVL    COND_NAME, 4(R2)                            ; 1157
                                        7E  7C 00048    CLRQ    -(SP)                                       ; 1158
```

```
                                        7E  D4 0004A          CLRL    -(SP)                                          ;
                                        52  DD 0004C          PUSHL   R2                                             ;
                    00000000G  00       04  FB 0004E          CALLS   #4, SYS$PUTMSG                                 ;
                               62       02  C0 00055          ADDL2   #2, (R2)                                       ; 1159
                                        7E  7C 00058          CLRQ    -(SP)                                          ; 1161
                    00000000G  00       02  FB 0005A          CALLS   #2, SYS$UNWIND                                 ;
                               0B       50  E8 00061          BLBS    R0, 1$                                         ;
                                        03  DD 00064          PUSHL   #3                                             ; 1163
                    00000000G  00       01  FB 00066          CALLS   #1, PAS$$BUGCHECK                              ;
                                        06  11 0006D          BRB     2$                                             ;
                               50  0918 8F  3C 0006F 1$:       MOVZWL  #2328, R0                                      ; 1168
                                            04 00074          RET                                                    ;
                                        50  D4 00075 2$:       CLRL    R0                                             ; 1170
                                            04 00077          RET                                                    ;

; Routine Size:  120 bytes,    Routine Base:  _PAS$CODE + 02B0

; 1118          1171  1
; 1119          1172  1 !<BLF/PAGE>
```

```
;  1121          1173  1 %SBTTL 'INITIALIZE_QUEUE - Initialize FILE_QUEUE'
;  1122          1174  1 ROUTINE INITIALIZE_QUEUE
;  1123          1175  1     : NOVALUE =
;  1124          1176  1
;  1125          1177  1 !++
;  1126          1178  1 ! FUNCTIONAL DESCRIPTION:
;  1127          1179  1 !
;  1128          1180  1 !       Initializes FILE_QUEUE to be an empty queue.
;  1129          1181  1 !
;  1130          1182  1 ! CALLING SEQUENCE:
;  1131          1183  1 !
;  1132          1184  1 !       INITIALIZE_QUEUE ()
;  1133          1185  1 !
;  1134          1186  1 ! FORMAL PARAMETERS:
;  1135          1187  1 !
;  1136          1188  1 !       NONE
;  1137          1189  1 !
;  1138          1190  1 ! IMPLICIT INPUTS:
;  1139          1191  1 !
;  1140          1192  1 !       FILE_QUEUE
;  1141          1193  1 !       QUEUE_INITIALIZED
;  1142          1194  1 !
;  1143          1195  1 ! IMPLICIT OUTPUTS:
;  1144          1196  1 !
;  1145          1197  1 !       FILE_QUEUE
;  1146          1198  1 !       QUEUE_INITIALIZED
;  1147          1199  1 !
;  1148          1200  1 ! COMPLETION STATUS:
;  1149          1201  1 !
;  1150          1202  1 !       NONE
;  1151          1203  1 !
;  1152          1204  1 ! SIDE EFFECTS:
;  1153          1205  1 !
;  1154          1206  1 !       Makes FILE_QUEUE an empty queue.
;  1155          1207  1 !
;  1156          1208  1 ! SIGNALLED ERRORS:
;  1157          1209  1 !
;  1158          1210  1 !       NONE
;  1159          1211  1 !--
;  1160          1212  1
;  1161          1213  2     BEGIN
;  1162          1214  2
;  1163          1215  2     LOCAL
;  1164          1216  2         AST_STATUS;                             ! Previous AST enable status
;  1165          1217  2
;  1166          1218  2     BUILTIN
;  1167          1219  2         TESTBITCS;
;  1168          1220  2
;  1169          1221  2     !+
;  1170          1222  2     ! Disable ASTs.
;  1171          1223  2     !-
;  1172          1224  2
;  1173          1225  2     AST_STATUS = $SETAST (ENBFLG = 0);
;  1174          1226  2
;  1175          1227  2     !+
;  1176          1228  2     ! If QUEUE_INITIALIZED is still clear, initialize FILE_QUEUE to
;  1177          1229  2     ! be an empty queue.  Set QUEUE_INITIALIZED.
```

```
;  1178          1230  2      !-
;  1179          1231  2
;  1180          1232  2      IF TESTBITCS (QUEUE_INITIALIZED)
;  1181          1233  2      THEN
;  1182          1234  3          BEGIN
;  1183          1235  3          FILE_QUEUE [0] = FILE_QUEUE;            ! Set forward link
;  1184          1236  3          FILE_QUEUE [1] = .FILE_QUEUE [0];       ! Set backward link
;  1185          1237  3          END;
;  1186          1238  2
;  1187          1239  2      !+
;  1188          1240  2      ! Reenable ASTs if previously enabled.
;  1189          1241  2      !-
;  1190          1242  2
;  1191          1243  2      IF .AST_STATUS EQL SS$_WASSET
;  1192          1244  2      THEN
;  1193          1245  2          $SETAST (ENBFLG = 1);
;  1195          1247  2      RETURN;
;  1196          1248  2
;  1197          1249  1      END;                                        ! End of routine INITIALIZE_QUEUE



                                000C 00000 INITIALIZE_QUEUE:
                                           .WORD   Save R2,R3                                          ; 1174
                     53 00000000G   00  9E 00002          MOVAB   SYS$SETAST, R3                      ;
                     52 00000000'   EF  9E 00009          MOVAB   FILE_QUEUE, R2                      ;
                                    7E  D4 00010          CLRL    -(SP)                               ; 1225
                                    63  01 FB 00012          CALLS   #1, SYS$SETAST                 ;
                           07   0C  A2  00 E2 00015          BBSS    #0, QUEUE_INITIALIZED, 1$      ; 1232
                                    62  62 9E 0001A          MOVAB   FILE_QUEUE, FILE_QUEUE         ; 1235
                                04  A2  62 D0 0001D          MOVL    FILE_QUEUE, FILE_QUEUE+4       ; 1236
                                    09  50 D1 00021 1$:      CMPL    AST_STATUS, #9                 ; 1243
                                        05 12 00024          BNEQ    2$                             ;
                                        01 DD 00026          PUSHL   #1                             ; 1245
                                    63  01 FB 00028          CALLS   #1, SYS$SETAST                 ;
                                        04 0002B 2$:         RET                                    ; 1249

; Routine Size:  44 bytes,    Routine Base:  _PAS$CODE + 0328

;  1198          1250  1
;  1199          1251  1 !<BLF/PAGE>
```

```
;  1201          1252  1 %SBTTL 'SERVICE_REQUEST - Service remove request'
;  1202          1253  1 ROUTINE SERVICE_REQUEST
;  1203          1254  1     : NOVALUE =
;  1204          1255  1
;  1205          1256  1 !++
;  1206          1257  1 ! FUNCTIONAL DESCRIPTION:
;  1207          1258  1 !
;  1208          1259  1 !       Removes all FCBs from FILE_QUEUE that have DEALLOC set.
;  1209          1260  1 !
;  1210          1261  1 ! CALLING SEQUENCE:
;  1211          1262  1 !
;  1212          1263  1 !       SERVICE_REQUEST ()
;  1213          1264  1 !
;  1214          1265  1 ! FORMAL PARAMETERS:
;  1215          1266  1 !
;  1216          1267  1 !       NONE
;  1217          1268  1 !
;  1218          1269  1 ! IMPLICIT INPUTS:
;  1219          1270  1 !
;  1220          1271  1 !       FILE_QUEUE
;  1221          1272  1 !       REQUEST_LEVEL
;  1222          1273  1 !       REMOVE_REQUESTED
;  1223          1274  1 !
;  1224          1275  1 ! IMPLICIT OUTPUTS:
;  1225          1276  1 !
;  1226          1277  1 !       FILE_QUEUE
;  1227          1278  1 !       REQUEST_LEVEL
;  1228          1279  1 !       REMOVE_REQUESTED
;  1229          1280  1 !
;  1230          1281  1 ! COMPLETION STATUS:
;  1231          1282  1 !
;  1232          1283  1 !       NONE
;  1233          1284  1 !
;  1234          1285  1 ! SIDE EFFECTS:
;  1235          1286  1 !
;  1236          1287  1 !       Removes FCBs from queue.
;  1237          1288  1 !
;  1238          1289  1 ! SIGNALLED ERRORS:
;  1239          1290  1 !
;  1240          1291  1 !       NONE
;  1241          1292  1 !--
;  1242          1293  1
;  1243          1294  2     BEGIN
;  1244          1295  2
;  1245          1296  2     LOCAL
;  1246          1297  2         FREE_LIST: REF VECTOR [, LONG];          ! List of FCBs we deallocated
;  1247          1298  2
;  1248          1299  2     BUILTIN
;  1249          1300  2         REMQUE;
;  1250          1301  2
;  1251          1302  2     !+
;  1252          1303  2     ! Initialize FREE_LIST.
;  1253          1304  2     !-
;  1254          1305  2
;  1255          1306  2     FREE_LIST = 0;
;  1256          1307  2
;  1257          1308  2     !+
```

```
;  1258          1309  2     ! Increment REQUEST_LEVEL.  If we are at level zero, then we can
;  1259          1310  2     ! scan the queue and do REMQUEs.
;  1260          1311  2     !-
;  1261          1312  2
;  1262          1313  2     IF (REQUEST_LEVEL=.REQUEST_LEVEL+1) EQL 0
;  1263          1314  2     THEN
;  1264          1315  2         BEGIN
;  1265          1316  2
;  1266          1317  2         LOCAL
;  1267          1318  2             AST_STATUS,                     ! Previous AST enable status
;  1268          1319  2             CURRENT_FCB: REF VECTOR [, LONG];   ! Current FCB to look at
;  1269          1320  2
;  1270          1321  2         !+
;  1271          1322  2         ! Disable ASTs and remember previous status.  This makes us
;  1272          1323  2         ! multi-stream AST reentrant.
;  1273          1324  2         !-
;  1274          1325  2
;  1275          1326  2         AST_STATUS = $SETAST (ENBFLG = 0);
;  1276          1327  2
;  1277          1328  2         !+
;  1278          1329  2         ! Get first FCB on FILE_QUEUE.
;  1279          1330  2         !-
;  1280          1331  2
;  1281          1332  2         CURRENT_FCB = .FILE_QUEUE [0];  ! Forward link
;  1282          1333  2
;  1283          1334  2         !+
;  1284          1335  2         ! Clear RENOVE_REQUESTED.
;  1285          1336  2         !-
;  1286          1337  2
;  1287          1338  2         REMOVE_REQUESTED = 0;
;  1288          1339  2
;  1289          1340  2         !+
;  1290          1341  3         ! While we haven't run out of FCBs, look for FCBs with the
;  1291          1342  3         ! DEALLOC bit set, remove them from the queue, and insert them
;  1292          1343  3         ! on the list of blocks to be freed.
;  1293          1344  3         !-
;  1294          1345  3
;  1295          1346  3         WHILE (.CURRENT_FCB NEQA FILE_QUEUE) DO ! Back at queue header?
;  1296          1347  4             BEGIN
;  1297          1348  4             !+
;  1298          1349  4             ! Allow offset to zero-origin of FCB.
;  1299          1350  4             !-
;  1300          1351  4             LOCAL
;  1301          1352  4                 FCB_ORIGIN: REF $PAS$FCB_CONTROL_BLOCK;
;  1302          1353  4             FCB_ORIGIN = .CURRENT_FCB + FCB$K_BLN;
;  1303          1354  4             IF .FCB_ORIGIN [FCB$V_DEALLOC]
;  1304          1355  4             THEN
;  1305          1356  5                 BEGIN
;  1306          1357  5                 LOCAL
;  1307          1358  5                     TEMP;                   ! Output from REMQUE
;  1308          1359  5                 REMQUE (CURRENT_FCB [0], TEMP);
;  1309          1360  5                 CURRENT_FCB [0] = .FREE_LIST;   ! Add FCB to free list
;  1310          1361  5                 FREE_LIST = .CURRENT_FCB;
;  1311          1362  4                 END;
;  1312          1363  4
;  1313          1364  4             !+
;  1314          1365  4             ! Get next FCB from the queue.
```

```
;  1315          1366  4               !-
;  1316          1367  4
;  1317          1368  4               CURRENT_FCB = .CURRENT_FCB [0];      ! Forward link
;  1318          1369  3               END;
;  1319          1370  3
;  1320          1371  3           !+
;  1321          1372  3           ! Reenable ASTs if they were previously enabled.
;  1322          1373  3           !-
;  1323          1374  3
;  1324          1375  3           IF .AST_STATUS EQL SS$_WASSET
;  1325          1376  3           THEN
;  1326          1377  3               $SETAST (ENBFLG = 1);
;  1327          1378  3
;  1328          1379  3           END;
;  1329          1380  2
;  1330          1381  2       !+
;  1331          1382  2       ! Decrement REQUEST_LEVEL.
;  1332          1383  2       !-
;  1333          1384  2
;  1334          1385  2       REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  1335          1386  2
;  1336          1387  2       !+
;  1337          1388  2       ! Free all blocks on FREE_LIST.
;  1338          1389  2       !-
;  1339          1390  2
;  1340          1391  2       WHILE (.FREE_LIST NEQA 0) DO
;  1341          1392  3           BEGIN
;  1342          1393  3           LOCAL
;  1343          1394  3               BLOCK_ADDR;
;  1344          1395  3           BLOCK_ADDR = .FREE_LIST;
;  1345          1396  3           FREE_LIST = .FREE_LIST [0];
;  1346          1397  3           PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, BLOCK_ADDR);
;  1347          1398  3           END;
;  1348          1399  2
;  1349          1400  2       RETURN;
;  1350          1401  2
;  1351          1402  1       END;                                    ! End of routine SERVICE_REQUEST


                                003C 00000 SERVICE_REQUEST:
                                            .WORD   Save R2,R3,R4,R5                                    ; 1253
                    55 00000000G    00  9E 00002                    MOVAB   SYS$SETAST, R5
                    54 00000000'    EF  9E 00009                    MOVAB   REQUEST_LEVEL, R4
                    5E              04  C2 00010                    SUBL2   #4, SP
                                    53  D4 00013                    CLRL    FREE_LIST                           ; 1306
                                    64  D6 00015                    INCL    REQUEST_LEVEL                       ; 1313
                                    36  12 00017                    BNEQ    4$
                                    7E  D4 00019                    CLRL    -(SP)                               ; 1326
                    65              01  FB 0001B                    CALLS   #1, SYS$SETAST
                    51          F8  A4  D0 0001E                    MOVL    FILE_QUEUE, CURRENT_FCB             ; 1332
                                08  A4  D4 00022                    CLRL    REMOVE_REQUESTED                    ; 1338
                    52          F8  A4  9E 00025 1$:                MOVAB   FILE_QUEUE, R2                      ; 1346
                    52              51  D1 00029                    CMPL    CURRENT_FCB, R2
                                    17  13 0002C                    BEQL    3$
```

```
                                52        44    A1  9E 0002E             MOVAB   68(R1), FCB_ORIGIN                          ; 1353
                     09         FE        A2    01  E1 00032             BBC     #1, -2(FCB_ORIGIN), 2$                      ; 1354
                                52              61  0F 00037             REMQUE  (CURRENT_FCB), TEMP                         ; 1359
                                61              53  D0 0003A             MOVL    FREE_LIST, (CURRENT_FCB)                    ; 1360
                                53              51  D0 0003D             MOVL    CURRENT_FCB, FREE_LIST                      ; 1361
                                51              61  D0 00040 2$:         MOVL    (CURRENT_FCB), CURRENT_FCB                  ; 1368
                                                E0  11 00043             BRB     1$                                          ; 1346
                                09              50  D1 00045 3$:         CMPL    AST_STATUS, #9                              ; 1375
                                                05  12 00048             BNEQ    4$                                          ;
                                                01  DD 0004A             PUSHL   #1                                          ; 1377
                                65              01  FB 0004C             CALLS   #1, SYS$SETAST                              ;
                                                64  D7 0004F 4$:         DECL    REQUEST_LEVEL                               ; 1385
                                                53  D5 00051 5$:         TSTL    FREE_LIST                                   ; 1391
                                                16  13 00053             BEQL    6$                                          ;
                                6E              53  D0 00055             MOVL    FREE_LIST, BLOCK_ADDR                       ; 1395
                                53              63  D0 00058             MOVL    (FREE_LIST), FREE_LIST                      ; 1396
                                                5E  DD 0005B             PUSHL   SP                                          ; 1397
                                7E        0138  8F  3C 0005D             MOVZWL  #312, -(SP)                                 ;
                     00000000G  00              02  FB 00062             CALLS   #2, PAS$$FREE_VM                            ;
                                                E6  11 00069             BRB     5$                                          ; 1391
                                                    04 0006B 6$:         RET                                                 ; 1402

; Routine Size:  108 bytes,    Routine Base:  _PAS$CODE + 0354

; 1352          1403  1
; 1353          1404  1 !<BLF/PAGE>
```

```
; 1355          1405  1 END                                   ! End of module PAS$$FILE_UTIL
; 1356          1406  1
; 1357          1407  0 ELUDOM
```

```
;                                   PSECT SUMMARY

;       Name                    Bytes                           Attributes

;  _PAS$DATA                      20  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
;  _PAS$CODE                     960  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
```

```
;                               Library Statistics

;                                        -------- Symbols --------      Pages       Processing
;       File                             Total    Loaded   Percent      Mapped      Time

;  _$255$DUA28:[SYSLIB]STARLET.L32;1      9776        19         0         581       00:00.9
;  _$255$DUA28:[PASRTL.OBJ]PASLIB.L32;1    427       105        24          33       00:00.4
```

```
;                                   COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS$:PASFILEUT/OBJ=OBJ$:PASFILEUT MSRC$:PASFILEUT/UPDATE=(ENH$:PASFILEUT
;       )

; Size:         960 code + 20 data bytes
; Run Time:       00:21.6
; Elapsed Time:   01:09.6
; Lines/CPU Min:   5915
; Lexemes/CPU-Min: 16758
; Memory Used:  102 pages
; Compilation Complete
```

PASFVOUTP
LIS

PASEOLN2
LIS

PASHEAP
LIS

PASHANDLE
LIS

PASFAB
LIS

PASGET
LIS

PASCVTRT
LIS

PASDATE
LIS

PASEOF2
LIS

PASFINDK
LIS

PASFVINPU
LIS

PASEXPO
LIS

PASGOTO
LIS

PASFILEUT
LIS

PASHALT
LIS

PASDELETE
LIS

PASFIND2
LIS